

## **REMARKS/ARGUMENTS**

### **Status of the Application**

Prior to this amendment, claims 1-42 were pending in this application. In the office action, the Examiner rejected claims 24, 27, 28, 37, and 42 under 35 U.S.C. §112, second paragraph. In addition, the Examiner rejected claims 1, 12, 21, 22, 32, 41, and 42 under 35 U.S.C. § 102(b) as being anticipated by Matsushita, Japanese Patent No. JP 03-165893 (hereinafter "Matsushita") or Tsukada, Japanese Patent No. JP 07-236884 (hereinafter "Tsukada"). Further, the Examiner rejected claims 2-4, 6-9, 11, 13-15, 17-18, 23-24, 26-29, 31 33-35, and 37-38 under 35 U.S.C. § 103(a) as being unpatentable over Matsushita or Tsukada in view of Boyce et al. (U.S. Patent No. 3,018,187), Peterson (U.S. Patent No. 4,968,489) and/or Block (Disinfection, Sterilization, and Preservation, 4th Ed.). Finally, the Examiner indicated that claims 5, 10, 16, 19, 20, 25, 30, 36, 39, and 40 are allowable over the art of record, but are objected to for depending from rejected base claims.

Applicant has amended claims 1-2, 6, 11, 13-17, 22, 26-27, 31, and 33-37, and canceled claims 9, 21, 29, and 41-42 without prejudice. Claims 3-5, 7-8, 10, 12, 18-20, 23-25, 28, 30, 32, and 38-40 remain unchanged by this amendment. Applicant submits that no new subject matter has been introduced by the amendments. Claims 1-8, 10-20, 22-28, and 30-40 remain pending in this application after filing this amendment.

### **The Claims**

#### **Section 112 Rejections**

The Examiner has rejected claims 24, 27, 28, 37, and 42 under 35 U.S.C. §112, second paragraph, citing various antecedent basis problems. Applicant has amended the claims to fix these problems, and Applicant has deleted claim 42. Accordingly, Applicant submits that it has overcome the §112 rejections, and the claims are now in condition for allowance.

Section 102(b) Rejections

The Examiner has rejected claims 1, 12, 21, 22, 32, 41, and 42 under 35 U.S.C. § 102(b) as being anticipated by Matsushita, Japanese Patent No. JP 03-165893 (hereinafter “Matsushita”) or Tsukada, Japanese Patent No. JP 07-236884 (hereinafter “Tsukada”).

Applicant respectfully disagrees with the Examiner, and therefore, traverses the rejection.

Applicant submits the following arguments in support of his position.

Applicant has amended claim 1, so that it now recites:

An apparatus for pumping and sterilizing or disinfecting fluids, comprising:

a fluid conduit;

a ultraviolet light source which is at least partially within the fluid conduit, the ultraviolet light source comprising a protective sleeve surrounding at least a portion of the ultraviolet light source and protecting the ultraviolet light source from breaking; and

an air drive unit coupled to the fluid conduit and adapted to cause a liquid to flow through the fluid conduit and past the at least a portion of the ultraviolet light source, wherein said ultraviolet light source generates an ultraviolet light which kills microorganisms in the liquid and said fluid conduit.

(amendments shown).

Matsushita and Tsukada do not disclose each of these limitation. Matsushita discloses a hollow vessel with a UV lamp in it and an air pump. Matsushita does not disclose a fluid conduit with a UV light source in it as recited in the claims. Further, the air pump in Matsushita merely pumps air to create bubbles to help the purification process. Matsushita does not teach “an air drive unit couple to the fluid conduit an adapted to cause a liquid to flow through the fluid conduit and past at least a portion of the ultraviolet light source” as now recited in claim 1. Finally, Matsushita does not disclose an ultraviolet light source comprising “a protective sleeve surrounding at least a portion of the ultraviolet light source and protecting the ultraviolet light source from breaking” as claimed.

Similarly, Tsukada does not disclose each of the limitations in claim 1 either. Tsukada merely teaches a chamber having a UV lamp and an ozone magnetizing air pump. The

purpose of the pump in Tsukada is to inject ozone into the water. Tsukada does not teach “an air drive unit coupled to the fluid conduit and adapted to cause a liquid to flow through the fluid conduit and past the at least a portion of the ultraviolet light source” as recited in claim 1. Further, Tsukada also does not teach an ultraviolet light source comprising “a protective sleeve surrounding at least a portion of the ultraviolet light source and protecting the ultraviolet light source from breaking” as claimed.

As a result, Applicant submits that neither Tsukada nor Matsushita teach or suggest each of the limitations in claim 1, and therefore, claim 1 is allowable over the cited art.

With regard to independent claim 22, this claims includes similar limitations as claim 1, and therefore is allowable for similar reasons.

With regard to dependent claims 12, and 32, Applicant submits that these claims are allowable as being directed to specific novel substitutes, as well as by depending from allowable parent claims. Claims 21, 41 and 42 have been cancelled.

#### Section 103(a) Rejections

The Examiner has rejected claims 2-4, 6-9, 11, 13-15, 17-18, 23-24, 26-29, 31 33-35, and 37-38 under 35 U.S.C. § 103(a) as being unpatentable over Matsushita or Tsukada in view of Boyce et al. (U.S. Patent No. 3,018,187), Peterson (U.S. Patent No. 4,968,489) and/or Block (Disinfection, Sterilization, and Preservation, 4th Ed.). Applicant respectfully disagrees with the Examiner, and therefore, traverses the rejections. Applicant submits the following arguments in support of his position.

First, Applicant has cancelled claims 9 and 29 without prejudice, and therefore, will not address these claims. Further, Applicant notes that claims 2-4, 6-8, 11, 13-15, 17-18, 23-24, 26-28, 31 33-35, and 37-38 all depend either directly or indirectly from independent claims 1 or 22. Accordingly, Applicant submits that these claims are allowable as being directed to specific novel substitutes, as well as by depending from allowable parent claims.

#### Allowable Subject Matter

The Examiner has indicated that claims 5, 10, 16, 19, 20, 25, 30, 36, 39, and 40 contain allowable subject matter, and would be allowable over the art of record if rewritten in

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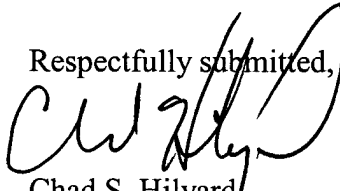
dependent form. Applicant agrees with the Examiner and thanks the Examiner for her careful consideration of these claims. Applicant submits that these claims still are allowable for being directed to novel subject matter. In addition, given the Amendments to independent claims 1 and 22, Applicant submits that these claims also are allowable by depending from allowable parent claims, which is why Applicant has not rewritten the claims in independent form at this time.

**CONCLUSION**

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. Accordingly, Applicant respectfully requests the Examiner to issue a formal Notice of Allowance as soon as possible.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,



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